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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,574	12/09/2004	Brian Albert Wittman	PU020277	1365

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Joseph S Tripoli  
Thomson Licensing Inc  
PO Box 5312  
Princeton, NJ 08543-5312

EXAMINER
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VAUGHAN, MICHAEL R

ART UNIT	PAPER NUMBER
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2131

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09/03/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/517,574	<b>Applicant(s)</b> WITTMAN, BRIAN ALBERT	
	<b>Examiner</b> MICHAEL VAUGHAN	<b>Art Unit</b> 4148	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/09/04</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

The instant application having Application No. 10/517574 filed on 12/9/2004 is presented for examination by the examiner.

### ***Oath/Declaration***

The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63**.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 is rejected under 35 U.S.C. 101 as directed to non-statutory subject matter of software, *per se*. The claim lacks the necessary physical articles or objects to constitute a machine or manufacture within the meaning of 35 U.S.C. 101. It is clearly not a series of steps or acts to be a process nor is there a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. It is at best, function descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are non-statutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable

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medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994).

Merely claiming non-functional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”).

Claims 2, 4, and 6 are rejected under 35 U.S.C. 101 as non-statutory for at least the reason stated above. Claims 2, 4, and 6 are depended on claim 1, however, they do not add any feature or subject matter that would solve any of the non-statutory deficiencies of claim 1.

Claim 7 is rejected under 35 U.S.C. 101 as directed to non-statutory subject matter. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

The claimed invention is nothing more than an abstract idea that is not a practical application producing a useful, concrete, and tangible result. A claimed series

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of steps or acts that do not result in a useful, concrete, and tangible result are not statutory within the meaning of 35 U.S.C. 101.

Claims 8-15 are rejected under 35 U.S.C. 101 as non-statutory for at least the reason stated above. Claims 8-15 are depended on claim 7, however, they do not add any feature or subject matter that would solve any of the non-statutory deficiencies of claim 7.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 and 6-15 are rejected under 35 U.S.C. 102(e) as being anticipated by US PUB US 2002/0133586 A1 to Shanklin et al hereinafter Shanklin.

As per claim 1, Shanklin teaches an apparatus adapted to communicate via a network, comprising a firewall [0013], for identifying those packets associated with inappropriate activity [013]; and at least one user discernable indicator associated with said firewall (alert) [0018], for contemporaneously indicating that a number of packets

associated with said inappropriate activity have exceeded a threshold level [0074].

Shanklin explicitly teaches monitoring packets to check for compliance to rules and making decisions in real-time as to what the response should be.

As per claim 2, Shanklin teaches that an activity is determined using a plurality of rules divided into classes (set of attack parameters) indicative of levels of inappropriateness [0074].

As per claim 3, Shanklin teaches an apparatus comprises at least one of a modem, a router, and a bridge [0080].

As per claim 4, Shanklin teaches an indicator comprises at least one visual indicator (alert to admin) [0105].

As per claim 6, Shanklin teaches one visual indicator comprises a highlighted icon (alert to admin) displayed on a computing device [0105].

As per claim 7, Shanklin teaches a method comprising:  
examining data traffic to determine whether at least one of a plurality of rules has been violated [0074], said rules defining indicators of inappropriate communication activity (parameters are exceeded indicating an attack is in progress in combination with rules and responding appropriately) [0074] ; and  
in the case of a rule of at least a first class of the plurality of rules being violated, filtering said data traffic violating said first class rule and triggering a user discernable indicator [0074]. Shanklin explicitly teaches monitoring packets to check for compliance to rules and making decisions in real-time as to what the response should be including a combination of an alert and blocking traffic.

As per claim 8, Shanklin teaches determining if a first threshold level of rule violation has been exceeded prior to filtering said data traffic [0074]. In one embodiment Shanklin teaches monitoring traffic and then if the numbers of packets exceed a safe level during a time, denying access to said packets.

As per claim 9, Shanklin teaches determining if a first threshold level of rule [0076] violation has been exceeded prior to triggering the user discernable indicator (alert) [0074].

As per claim 10, Shanklin teaches in the case of a rule of a second class being violated, filtering said data traffic violating said second class rule [0078] and triggering the user discernable indicator [0074-0079]. Shanklin explicitly teaches different classes of threats and how to handle those threats based on rules set by an admin. Shanklin teaches there can be any number of these rule classes (including a second or third) and that different responses and even combinations of responses applicable based on the level of the threat.

As per claim 11, Shanklin teaches determining if a second threshold level of rule violation has been exceeded prior to filtering said data traffic [0076].

As per claim 12, Shanklin teaches determining if a second threshold level of rule violation has been exceeded prior to triggering the user discernable indicator [0074-0076].

As per claim 13, Shanklin teaches a case of a rule of a third class being violated, filtering said data traffic violating said third class rule; and triggering the user discernable indicator [0074-0079]. Shanklin explicitly teaches

different classes of threats and how to handle those threats based on rules set by an admin. Shanklin teaches there can be any number of these rule classes (including a second or third) and that different responses and even combinations of responses applicable based on the level of the threat.

As per claim 14, Shanklin teaches determining if a third threshold level of rule violation has been exceeded prior to filtering said data traffic [0068 and 0035].

As per claim 15, Shanklin teaches determining if a third threshold level of rule violation has been exceeded prior to triggering the user discernable indicator [0073].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shanklin in view of US PUB US 2002/0080784 A1 to Krumel hereinafter Krumel.

As per claim 5 Shanklin teaches visual indicators including alerts being sent to a system administrator in the event of a security event of some kind. Shanklin is silent is explicitly disclosing that one type of alert could be a light emitting device proximate to the apparatus. Krumel teaches the use of light emitting diodes aka LEDs (light emitting devices) to provide visual feedback of the data protection system status [0108]. Krumel



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also explicitly teaches that LEDs are preferable in providing alarm type information. It stands to reason that the LED must be proximate to the apparatus in order for the administrator to view such indicia. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Shanklin with the teaching of Krumel. Specifically, incorporating the feature of Krumel with respect to LEDs as a means to alert the administrator of a security system in Shanklin.

Claims 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shanklin in view of USP 6,185,624B1 to Fijolek et al, hereinafter Fijolek.

As per claim 16, Shanklin teaches a firewall program having associated with it a set of rules [0074], said firewall program resident in said memory and executable by said controller (mid-network switching device i.e. Switch) to cause examining data (monitoring) of packets from said downstream (internal network) and upstream circuitry( internet) [0034] such that inappropriate activity above a threshold level results [0074] in the triggering for at least one visual indicator viewing by a user [0076-0079]. While Shanklin teaches that his invention is carried out in a mid-network switch device, he does not explicitly teach of a cable modem being used. He does give an example of a router which one of skill in the art would know performs certain basic hardware functions. One of skill in the art would also know a mid-network switching device has internal circuitry including a controller and memory. Fijolek teach the use of a cable modem which has all of these features (upstream, downstream, controller, memory, and able to communicate data packets across a network (col. 2, lines 5-10 and col. 8, 45-

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55). Moreover, Fijolek teaches that his cable modem has management software whereby an admin can program it via a network. This is precisely the feature taught by Shanklin's invention. One skilled in the art could see that the cable modem of Fijolek can perform the methods of Shanklin's invention. One of ordinary skill in the art would have reasonable expectations of success and be motivated to protect the network from end to end. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Shanklin with the teaching of Fijolek. Namely to use a cable modem as a mid-network switching device.

As per claim 19, Shanklin teaches one visual indicator comprises a highlighted icon (alert message sent to admin) displayed on a computer device [0074-0079]

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shanklin and Fijolek as applied to claim 16 above, and further in view of US PUB 2002/0080784 to Krumel.

As per claim 17, Shanklin teaches visual indicators including alerts being sent to a system administrator in the event of a security event of some kind. Shanklin is silent is explicitly disclosing that one type of alert could be a light emitting diode. Krumel teaches the use of light emitting diodes aka LEDs to provide visual feedback of the data protection system status [0108]. Krumel also explicitly teaches that LEDs are preferable in providing alarm type information. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Shanklin with the

teaching of Krumel by incorporating the LEDs of Krumel as a means to alert the administrator of a security system in Shanklin.

As per claim 18, Shanklin teaches a visual indicator of alerting an admin when certain security rules and thresholds are exceeded [0074-0079]. Shanklin mentioned that the system monitors events and notifies the admin via a number of ways based on the security event. Shanklin and Fijolek are silent in disclosing that at least one visual indicator comprises a first LED for signifying a filtering event and a second LED for signifying filtering data packets deemed pernicious in a set of rules. Krumel teaches the use of LEDs to provide visual feedback of the data protection system status. More specifically Krumel teaches a multiple LEDs [0109] to provide feedback based on the event [0108]. As an example Krumel teaches using a first LED to indicate the protection system is filtering one or more packets. Krumel then teaches using a second LED to indicate the system is under attack [0108]. It would have been obvious to one of ordinary skill in the art the time of the invention to modify the teachings of Shanklin and Fijolek with the teachings of Krumel. The use of LEDs as taught by Krumel would improve the feedback in the combined system of Shanklin and Fijolek. It would provide quick visual stimuli to alert the admin on what is occurring in their network. One of ordinary skill in the art would be motivated to respond to a threat as quick as possible. And knowing how severe the threat is based on the visual indicia prevents the case of over reacting to every single security event.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USP 6,119,236 to Shipley teaches an intelligent network security device which operates in a LAN according to an intelligent network security method. The system looks for code and patterns of behavior and assigns a value to perceived attempted security breaches. The system then directs a firewall to take actions based on the breaches.

USPUB US 2001/0044886 A1 to Cassagnol et al teaches relates generally to security in programmed devices, and, more particularly, to a method and apparatus for controlling access to confidential data stored in a memory. The disclosed method includes the steps of: defining a predetermined section of the programmable memory as a repository for confidential data; addressing the predetermined section of the programmable memory; calculating a number of data blocks in the predetermined section having a predetermined characteristic; comparing the calculated number to a threshold value; and defining the memory as including confidential data in the predetermined section if the calculated number has a predetermined relationship to the threshold value.

Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to MICHAEL VAUGHAN whose telephone number is 571-270-7316. The examiner can normally be reached on Monday - Friday, 7:30 am - 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. V./

Examiner, Art Unit 2131

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2131

/Ayaz R. Sheikh/

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